



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : James S. Norris et al.

Art Unit : 1635

Serial No. : 10/082,973

Examiner : Janet L. Epps-Ford

Filed : February 26, 2002

Title : TISSUE-SPECIFIC AND TARGET RNA-SPECIFIC RIBOZYMES

MAIL STOP AF

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

TERMINAL DISCLAIMER UNDER 37 C.F.R. §§ 3.73(b) AND 1.321(b)

Pursuant to 37 C.F.R. § 3.73(b), THE PENN STATE RESEARCH FOUNDATION and MUSC FOUNDATION FOR RESEARCH DEVELOPMENT, certify that each is a co-assignee of the entire right, title, and interest in the above-referenced application by virtue of assignments from the inventors of the patent application referenced above. The assignments were recorded in the Patent and Trademark Office at Reel 010553, Frame 0168 on January 19, 2000, Reel 010553, Frame 0152 on January 19, 2000, and Reel 013364, Frame 0198 on October 8, 2002.

The Penn State Research Foundation and MUSC Foundation For Research Development also certify that each is a co-assignee of U.S. Patent No. 6,271,359. A copy of these assignments are attached for your reference.

The undersigned has reviewed all the documents in the chain of title of the above-referenced application and to the best of undersigned's knowledge and belief, title is in The Penn State Research Foundation and MUSC Foundation For Research Development.

The undersigned is empowered to act on behalf of the co-assignees.

Pursuant to 37 C.F.R. § 1.321(b), and to obviate an obviousness-type double patenting rejection, the co-assignees identified above hereby waive and disclaim the terminal portion of the term of the entire patent to be granted upon the above-referenced application subsequent to the

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CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

November 15, 2004

Date of Deposit

Signature

Judy Wasilkus

Typed or Printed Name of Person Signing Certificate

Applicant : James S. Norris et al.
Serial No. : 10/082,973
Filed : February 26, 2002
Page : 2 of 2

Attorney's Docket No.: 14017-004002 / PSU 96-1566

expiration date of U.S. Patent No. 6,271,359, whereby the patent granted on this above-referenced application and U.S. Patent No. 6,271,359 will expire on the same day, provided that any patent granted on the above-referenced application shall be enforceable only for and during such period that it is commonly owned with U.S. Patent No. 6,271,359.


The co-assignees identified above do not disclaim any terminal part of any patent granted on the above-referenced application prior to the expiration date of the full statutory term of U.S. Patent No. 6,271,359 in the event that it later: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid, is statutorily disclaimed in whole or terminally disclaimed under 37 C.F.R. § 1.321(a), has all claims cancelled by a reexamination certificate, or is otherwise terminated prior to expiration of its statutory term, except for the separation of legal title as stated above. The co-assignees herein do not disclaim or otherwise affect any part of U.S. Patent No. 6,271,359.

This disclaimer runs with any patent granted on the above-referenced application and is binding upon the grantee, its successors or assigns.

Please charge any additional fees, or make any credits, to Deposit Account No. 06-1050, referencing Attorney Docket No. 14017-004002.

Respectfully submitted,

Date: November 15, 2004



J. Patrick Finn III, Ph.D.
Reg. No. 44,109

Fish & Richardson P.C., P.A.
60 South Sixth Street
Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696



UNITED STATES
PATENT AND
TRADEMARK OFFICE



JKF
JXF

14017 004002

JANUARY 16, 2003

PTAS

Chief Information Officer
Washington, DC 20231
www.uspto.gov

FISH & RICHARDSON P.C.
JANIS K. FRASER
225 FRANKLIN STREET
BOSTON, MA 02110-2804



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UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/08/2002

REEL/FRAME: 013364/0198
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MEDICAL UNIVERSITY OF SOUTH
CAROLINA

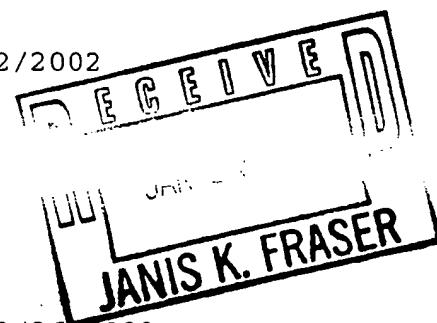
DOC DATE: 07/12/2002

ASSIGNEE:

MUSC FOUNDATION FOR RESEARCH
DEVELOPMENT
261 CALHOUN STREET, SUITE 305
CHARLESTON, SOUTH CAROLINA 29425

SERIAL NUMBER: 10082973
PATENT NUMBER:

FILING DATE: 02/26/2002
ISSUE DATE:



JEFFREY OLSEN, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

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JAN 21 2003

FISH & RICHARDSON, P.C.
BOSTON OFFICE

• No Docketing Required •
Reviewed By Practice Systems
Initials: <u>PEC</u>
Reviewed By Billing Secretary
Initials: _____

10-11-2002

Substitute Form PTO-1595
 Attorney Docket No.: 14017-004002
 Client's Ref. No.: PSU 96-1566




102247247

R SHEET

Y

10-8-02

Commissioner for Patents: Please record the attached original document(s) or copy(ies).	
1. Name of conveying party(ies): Medical University of South Carolina Additional name(s) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Name and address of receiving party(ies): MUSC Foundation for Research Development 261 Calhoun Street, Suite 305 Charleston, SC 29425 Additional names/addresses attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other: Execution Date: 07/12/2002	4. Application number(s) or patent number(s): If this document is being filed with a new application, the execution date of the application is: A. Patent Application No(s): <u>10/082,973</u> B. Patent No(s): Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Name/address of party to whom correspondence concerning document should be mailed: Janis K. Fraser, PH.D., J.D. Fish & Richardson P.C. 225 Franklin Street Boston, MA 02110-2804	6. Total number of applications/patents involved: 1 7. Total fee (37 CFR §3.41): \$40 <input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Authorized to charge Deposit Account. 8. Deposit Account No.: 06-1050 Please apply any additional charges, or any credits, to our Deposit Account No. 06-1050.
DO NOT USE THIS SPACE	
9. Statement and Signature: <i>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</i> <div style="display: flex; justify-content: space-between;"> <div> J. Patrick Finn III, Ph.D. Reg. No. 44,109 Name of Person Signing </div> <div style="text-align: center;">  Signature </div> <div style="text-align: right;"> <u>October 7, 2002</u> Date </div> </div>	
Total number of pages including coversheet, attachments and document: 2	

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10/10/2002 TDIAZ1 00000178 10082973

01 FC:581

40.00 OP

CERTIFICATE OF MAILING BY EXPRESS MAIL

Express Mail Label No. EV 115427549 USDate of Deposit: October 8, 2002

UNIVERSITY TO FOUNDATION ASSIGNMENT

WHEREAS, Medical University of South Carolina, having a place of business at 171 Ashley Avenue, Charleston, SC 29425-2230, (hereinafter termed "Assignor"), owns the entire right, title, and interest in the inventions described below (hereinafter "Said Inventions,")

TISSUE-SPECIFIC AND TARGET RNA-SPECIFIC RIBOZYMES

for which a United States Patent Application Serial No.: 10/082,973, was filed on February 26, 2002, and

WHEREAS, MUSC Foundation for Research Development, having a place of business at 261 Calhoun St., Suite 305, Charleston, SC 29425, (hereinafter termed "Assignee"), is desirous of acquiring the Assignor's right, title and interest in and to Said Inventions, and in and to any and all patent applications, patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignor to have been received from said Assignee, including the obligations of Assignee to Assignor contained in the Agreement between the Assignor and Assignee dated November 15, 2001:

1. Said Assignor does hereby, subject to the rights of the United States Government, if any, pursuant to 35 U.S.C. § 200 et seq., sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to Said Inventions; (b) in and to all rights to apply for foreign patents on Said Inventions pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on Said Inventions in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a divisional, substitution, continuation, or continuation-in-part of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.

2. Said Assignor hereby covenants and agrees to cooperate with said Assignee to enable said Assignee, to enjoy to the fullest extent the right, title and interest herein conveyed in the United States and foreign countries. Such cooperation by the Assignor shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by the parties (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering Said Inventions; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving Said Inventions; and (f) for legal proceedings involving Said Inventions and any applications therefore and any patents granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions.

3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon the Assignor, its successors, assigns and other legal representatives.

4. Said Assignor hereby warrants and represents that the Assignor has not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

5. In the event that the Agreement between the parties dated November 15, 2001 is terminated, Assignee shall, pursuant to the Agreement, transfer in full the rights conveyed in this Assignment back to Assignor or Assignor's designee, subject to any rights of third parties, including license rights, prior sales or other dispositions existing at the time of termination of the Agreement.

IN WITNESS WHEREOF, said Assignor has executed and delivered this instrument to said Assignee this 12th day of July, 2002.

**MUSC FOUNDATION FOR RESEARCH
DEVELOPMENT**

By: _____

Title: _____

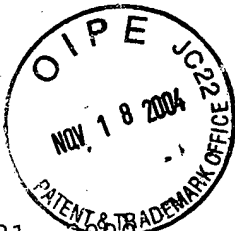
Executive Director

**MEDICAL UNIVERSITY OF
SOUTH CAROLINA**

By: _____

Title: _____

Interim Provost



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APRIL 21, 2000

PTAS

PENNIE & EDMONDS LLP
LAURA A. CORUZZI
1155 AVENUE OF THE AMERICAS
NEW YORK, NY 10036



101272016A

*Attorney
2406*

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RECORDATION DATE: 01/19/2000

REEL/FRAME: 010553/0168
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
CLAWSON, GARY A.

DOC DATE: 01/03/2000

ASSIGNOR:
PAN, WEI-HUA

DOC DATE: 01/03/2000

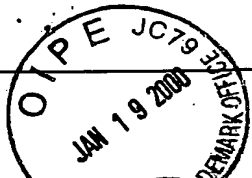
ASSIGNEE:
PENN STATE RESEARCH FOUNDATION,
THE
304 OLD MAIN STREET
UNIVERSITY PARK, PENNSYLVANIA 16802

SERIAL NUMBER: 09338942
PATENT NUMBER:

FILING DATE: 06/24/1999
ISSUE DATE:

010553/0168 PAGE 2

MAYA BENNETT, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS



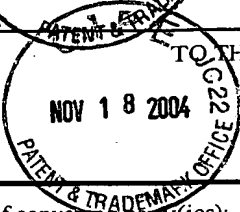
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Attorney Docket Number
9175-010TO THE HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
Box Assignment
Washington, DC 20231

Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

GARY A. CLAWSON and WEI-HUA PAN

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other _____Execution Date: January 3, 2000

2. Name and address of receiving party(ies):

Name: THE PENN STATE RESEARCH
FOUNDATIONAddress: 304 Old Main Street
University Park, Pennsylvania 16802

Country (if other than USA): _____

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s) 09/338,942

B. Patent No.(s) _____

Additional numbers attached? ☐ Yes ☒ No5. Name and address of party to whom correspondence
concerning document should be mailed:PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, NY 100366. Number of applications
and patents involved: one7. Total fee (37 CFR 3.41):.....\$ 40.00
Please charge to the deposit account listed in
Section 8.8. Deposit account number:
16-1150

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy
is a true copy of the original document.*Laura A. Coruzzi 30,742
Name of Person Signing Reg. No.

Signature

Date

Total number of pages including cover sheet:

3

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignment
Washington, D.C. 20231

ASSIGNMENT

WHEREAS, WE, GARY A. CLAWSON and WEI-HUA PAN, ASSIGNORS, citizens of the United States and China, respectively, residing at 5709 Rockmere Drive, Bethesda, Maryland 20816; and 907 Butler Court, Hummelstown, Pennsylvania 17036, respectively, are co-inventors with, JAMES S. NORRIS, MICHAEL G. SCHMIDT, BRIAN HOEL, JOSEPH W. DOLAN, DAVID SCHOFIELD, CAROLINE WESTWATER, and CANCAN HUANG, citizens of the United States, the United States, the United States, the United States, the United Kingdom, the United Kingdom, and China, respectively, residing at 1010 Casseque Province, Mt. Pleasant, South Carolina 29464; 1257 Wynnwood Court, Mt. Pleasant, South Carolina 29464; 36 S. Battery, Charleston, South Carolina 29401; 1821 Falling Circle, Mt. Pleasant, South Carolina 29464; 803K Runaway Bay Drive, Mt. Pleasant, South Carolina 29464; 803K Runaway Bay Drive, Mt. Pleasant, South Carolina 29464; and 1515 Ashley River Road, F49, Charleston, South Carolina 29407, respectively, of the invention in TISSUE-SPECIFIC AND TARGET RNA-SPECIFIC RIBOZYMES for which we have executed an application for a Patent of the United States

- ☑ which is identified by Pennie & Edmonds LLP docket no. 9175-010
- ☑ which was filed on June 24, 1999, as Application No. 09/338,942

and WHEREAS, The Penn State Research Foundation, a corporation existing under the laws of Pennsylvania, having a business address at 304 Old Main Street, University Park, Pennsylvania 16802, ASSIGNEE is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, I, the said ASSIGNOR, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that I have full right to convey our entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that I will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We herunto set our hands and seals this 3rd day of January, ~~1999~~ 2000.


GARY A. CLAWSON

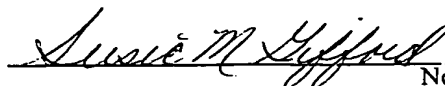
L.S.

State of Pennsylvania

County of Dauphin

} SS.:

On this 3rd day of January, ~~1999~~ 2000, before me, a Notary Public in and for the State and County aforesaid, personally appeared GARY A. CLAWSON, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.


Notary Public.

NOTARIAL SEAL
SUSIE M. GIFFORD, Notary Public
Hershey, Dauphin County
My Commission Expires May 12, 2003

[Signature]

WEI-HUA PAN

L.S.

State of Pennsylvania

County of Dauphin

} SS.:

On this 3rd day of January, 2000, before me, a Notary Public in and for the State and County aforesaid, personally appeared WEI-HUA PAN, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

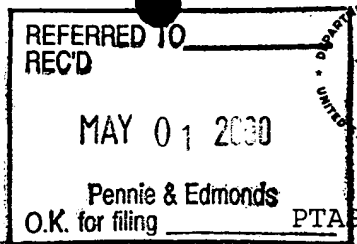
[Signature]

Notary Public.

NOTARIAL SEAL
SUSIE M. GIFFORD, Notary Public
Hershey, Dauphin County
My Commission Expires May 12, 2003

NOTARIAL SEAL
SUSIE M. GIFFORD, Notary Public
Hershey, Dauphin County
My Commission Expires May 12, 2003

NOTARIAL SEAL
SUSIE M. GIFFORD, Notary Public
Hershey, Dauphin County
My Commission Expires May 12, 2003



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9175-10-997



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PENNIE & EDMONDS LLP
LAURA A. CORUZZI
1155 AVENUE OF THE AMERICAS
NEW YORK, NY 10036

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2406

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RECORDATION DATE: 01/19/2000

REEL/FRAME: 010553/0152
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

NORRIS, JAMES S.

DOC DATE: 01/14/2000

ASSIGNOR:

SCHMIDT, MICHAEL G.

DOC DATE: 01/14/2000

ASSIGNOR:

HOEL, BRIAN

DOC DATE: 01/14/2000

ASSIGNOR:

DOLAN, JOSEPH W.

DOC DATE: 01/14/2000

ASSIGNOR:

SCHOFIELD, DAVID

DOC DATE: 01/14/2000

ASSIGNOR:

WESTWATER, CAROLINE

DOC DATE: 01/14/2000

ASSIGNOR:

HUANG, CANCAN

DOC DATE: 01/14/2000

010553/0152 PAGE 2

ASSIGNEE: •

MEDICAL UNIVERSITY OF SOUTH
CAROLINA
171 ASHLEY AVENUE
CHARLESTON, SOUTH CAROLINA 29425

SERIAL NUMBER: 09338942

PATENT NUMBER:

FILING DATE: 06/24/1999

ISSUE DATE:

TARA WASHINGTON, EXAMINER
ASSIGNMENT DIVISION
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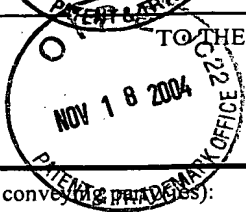
02-22-2000

Express Mail No. EL 265 832 312 US



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101272015

Attorney Docket Number
9175-010TO THE HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
Box Assignment
Washington, DC 20231

Please record the attached original documents or copy thereof.

1. Name of conveyer(s):

JAMES S. NORRIS, MICHAEL G. SCHMIDT,
BRIAN HOEL, JOSEPH W. DOLAN, DAVID
SCHOFIELD, CAROLINE WESTWATER, and
CANCAN HUANGAdditional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: January 14, 2000

2. Name and address of receiving party(ies):

Name: MEDICAL UNIVERSITY OF SOUTH
CAROLINAAddress: 171 Ashley Avenue
Charleston, South Carolina 29425

Country (if other than USA):

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s) 09/338,942

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No5. Name and address of party to whom correspondence
concerning document should be mailed:PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, NY 100366. Number of applications
and patents involved: one7. Total fee (37 CFR 3.41):.....\$ 40.00
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Section 8.8. Deposit account number:
16-1150

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9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy
is a true copy of the original document.*

Laura A. Coruzzi 30,742

Name of Person Signing Reg. No.

by: Jacqueline Benn
Laura A. Coruzzi Reg No. 43,492
Signature

January 19, 2000

Date

Total number of pages including cover sheet:

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01 FC:581 40.00 CH

ASSIGNMENT

WHEREAS, WE, JAMES S. NORRIS,, MICHAEL G. SCHMIDT, BRIAN HOEL, JOSEPH W. DOLAN, DAVID SCHOFIELD, CAROLINE WESTWATER, and CANCAN HUANG, ASSIGNORS, citizens of the United States, the United States, the United States, the United States, the United Kingdom, the United Kingdom, and China, respectively, residing at 1010 Casseque Province, Mt. Pleasant, South Carolina 29464; 1257 Wynnwood Court, Mt. Pleasant, South Carolina 29464; 36 S. Battery, Charleston, South Carolina 29401; 1821 Falling Circle, Mt. Pleasant, South Carolina 29464; 803K Runaway Bay Drive, Mt. Pleasant, South Carolina 29464; 803K Runaway Bay Drive, Mt. Pleasant, South Carolina 29464; and 1515 Ashley River Road, F49, Charleston, South Carolina 29407, respectively, are co-inventors with GARY A. CLAWSON and WEI-HUA PAN, citizens of the United States and China, respectively, residing at 5709 Rockmere Drive, Bethesda, Maryland 20816; and 907 Butler Court, Hummelstown, Pennsylvania 17036, respectively, of the invention in TISSUE-SPECIFIC AND TARGET RNA-SPECIFIC RIBOZYMES for which we have executed an application for a Patent of the United States

- ☒ which is identified by Pennie & Edmonds LLP docket no. 9175-010
- ☒ which was filed on June 24, 1999, as Application No. 09/338,942

and WHEREAS, Medical University of South Carolina, an agency of the State of South Carolina, having a business address at 171 Ashley Avenue, Charleston, South Carolina 29425, ASSIGNEE is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

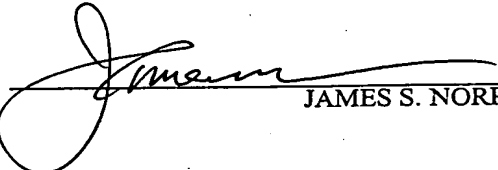
AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey our entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date 1/14/2000, 1999


JAMES S. NORRIS

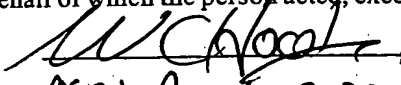
L.S.

State of SC

County of Charleston

} SS.:

On this 14 day of January, 1999 before me, a Notary Public in and for the State and County aforesaid, personally appeared JAMES S. NORRIS, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.


Notary Public.
Me: April 10, 2000

Date 14 January ²⁰⁰⁰₁₉₉₉ Michael G. Schmidt L.S.
MICHAEL G. SCHMIDT

State of SC }
County of Charleston } SS.:

On this 14 day of January ~~2000~~²⁰⁰⁰ before me, a Notary Public in and for the State and County aforesaid, personally appeared MICHAEL G. SCHMIDT, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

W. C. Hood
Notary Public.
rec: April 10, 2000

Date 14 Jan ²⁰⁰⁰₁₉₉₉ Brian Hoel L.S.
BRIAN HOEL

State of SC }
County of Charleston } SS.:

On this 14 day of January ~~2000~~²⁰⁰⁰ before me, a Notary Public in and for the State and County aforesaid, personally appeared BRIAN HOEL, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

W. C. Hood
Notary Public.
rec: April 10, 2000

Date 14 Jan ²⁰⁰⁰₁₉₉₉ Joseph W. Dolan L.S.
JOSEPH W. DOLAN

State of SC }
County of Charleston } SS.:

On this 14 day of January ~~2000~~²⁰⁰⁰ before me, a Notary Public in and for the State and County aforesaid, personally appeared JOSEPH W. DOLAN, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

W. C. Hood
Notary Public.
rec: April 10, 2000

Date 14 January ²⁰⁰⁰₁₉₉₉ D.A. Schofield L.S.
DAVID SCHOFIELD

State of SC }
County of Charleston } SS.:

On this 14 day of January ~~2000~~²⁰⁰⁰ before me, a Notary Public in and for the State and County aforesaid, personally appeared DAVID SCHOFIELD, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

W. C. Hood
Notary Public.
rec: April 10, 2000

Date 14 January, ²⁰⁰⁰~~1999~~ Caroline Westwater L.S.
CAROLINE WESTWATER

State of SC }
County of Charleston } SS.:

On this 14 day of January, ²⁰⁰⁰~~1999~~ before me, a Notary Public in and for the State and County aforesaid, personally appeared CAROLINE WESTWATER, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

[Signature]
Notary Public.
mce: April 10, 2000

Date 1/14, ²⁰⁰⁰~~1999~~ Cancan Huang L.S.
CANCAN HUANG

State of SC }
County of Charleston } SS.:

On this 14 day of January, ²⁰⁰⁰~~1999~~ before me, a Notary Public in and for the State and County aforesaid, personally appeared CANCEN HUANG, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

[Signature]
Notary Public.
mce: April 10, 2000